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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,662	08/22/2003	Gerhard Noessing	1406/162	9929

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3100 TOWER BLVD  
SUITE 1400  
DURHAM, NC 27707

EXAMINER

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,662

Applicant(s)

NOESSING ET AL.

Examiner

Daniel Swerdlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/29/03</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 through 6, 8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Issaa et al (US Patent 6,813,340).
4. Regarding Claim 1, Issaa discloses a SLIC that decreases (i.e., adjusts) ringing current (column 2, lines 64-67) using a method comprising: sensing (i.e., detecting) current on the tip and ring lines (column 3, line 65 through column 4, line 3); providing an indication of whether the current exceeds a threshold (i.e., comparing the detected ringing signal current with a predetermined current value); and decreasing the voltage of the ringing signal to reduce the ringing current in response to an excess current (i.e., when the detected ringing current is greater than the predetermined current value, reducing the ringing signal voltage of the ringing signal such that the ringing current is equal to the predetermined current value) (column 2, lines 56-67) where the ringing voltage is dropped across the POTS line and the user's telephone unit (i.e.,

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subscriber line and subscriber load) (Fig. 2, reference 116, 118; column 3, line 65 through column 4, line 3).

5. Regarding Claim 2, Issaa further discloses using a CPU controlled by stored programming (column 5, lines 16-29) to associate line current values with multiple voltage values (column 4, lines 59-63).

6. Regarding Claim 3, Issaa further discloses the monitoring of line current (Fig. 5, step 516; column 5, lines 40-42) that corresponds to the comparing step claimed being executed in a software loop (i.e., carried out periodically).

7. Regarding Claim 4, Issaa further discloses selecting a power supply voltage in accordance with the desired ringing voltage (column 4, lines 59-63).

8. Regarding Claim 5, Issaa further discloses a ringing circuit (Fig. 3, reference 316; Fig. 4, reference 416; column 5, lines 48-50) that corresponds to the ringing signal generator claimed and a system CPU (Fig. 4, reference 136; column 5, lines 16-35) that corresponds to the host controller claimed.

9. Regarding Claim 6, Issaa further discloses the CPU being controlled by stored programming (i.e., exhibiting a memory in which current values and associated voltage values are stored) (column 5, lines 16-29).

10. Regarding Claim 8, Issaa further discloses a current sensor (Fig. 4, reference 214'; column 5, lines 16-17) that corresponds to the interface circuit claimed.

11. Regarding Claim 10, Issaa further discloses a line card implementation (column 2, lines 56-62).

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12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Issaa in view of Dillon et al. (US Patent 5,260,996).

14. Regarding Claim 7, Issaa further discloses use of a power supply that provides a range of voltages (column 4, lines 59-63) under control of a system CPU (Fig. 4, reference 136; column 5, lines 16-35). Therefore, Issaa discloses all elements except the power supply including a DC/DC converter. Dillon discloses the use of a DC/DC converter to generate supply voltages in a subscriber interface, including ringing voltage (Fig. 1, reference 12; column 4, lines 44-52). Dillon further discloses that such converters are efficient in situations where output voltage must be decreased since they do not increase their power dissipation under such conditions. As such, it would have been obvious to one skilled in the art at the time of the invention to apply a DC/DC converter as taught by Dillon to the interface taught by Issaa for the purpose of realizing the aforesaid advantages.

15. Regarding Claim 9, Issaa further discloses use of a power supply that provides a range of voltages (column 4, lines 59-63) and a ringing circuit (Fig. 3, reference 316; Fig. 4, reference 416; column 5, lines 48-50) that corresponds to the ringing signal generator claimed. Therefore, Issaa discloses all elements except the power supply including a DC/DC converter. Dillon discloses the use of a DC/DC converter to generate supply voltages in a subscriber interface, including ringing voltage (Fig. 1, reference 12; column 4, lines 44-52). Dillon further discloses

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that such converters are efficient in situations where output voltage must be decreased since they do not increase their power dissipation under such conditions. As such, it would have been obvious to one skilled in the art at the time of the invention to apply a DC/DC converter as taught by Dillon to the interface taught by Issaa for the purpose of realizing the aforesaid advantages.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel Swerdlow  
Examiner  
Art Unit 2644